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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/869,701	07/03/2001	Naoki Ayai	017700-0149	8643

7590

08/30/2002

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EXAMINER

PIZIALI, ANDREW T

ART UNIT

PAPER NUMBER

1775

DATE MAILED: 08/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/869,701

Applicant(s)

AYAI ET AL.

Examiner

Andrew T Piziali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 1-13, 20, 22, 27 and 28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-19, 21 and 23-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>1</u> | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of (claims 14-19, 21 and 23-26) Group I, Species A, and Sub-Species a, in Paper No. 5 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Specification

- ✓ 2. The disclosure is objected to because of the following informalities: On page 1, line 23, and on page 2, line 20, reference is made to a cable conductor having a capacity of at least 100 MW. It is unclear what a "MW" represents. An amendment to the specification defining what MW represents would negate this objection.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

- ✓ 4. Claim 14 is rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. A brazing filler metal (3) interposed between the superposed end portions is critical or essential to the practice of the invention, but not included in the claim is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). Without the a brazing filler metal interposed between the superposed end portions the quantity of strain on an end of the junction would not be reduced to close to the quantity of strain on non-superposed

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portions of the first and second superconducting wires. Incorporation of dependent claim 15 into independent claim 14 would negate this rejection.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 14-19, 21 and 23-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

✓ Specifically regarding claim 14, the term "close to" is indefinite. It is not clear what "close to" represents. Deletion of lines 6-8 would negate this rejection.

✓ Specifically regarding claims 16-18 and 20-21, the term "tape-like" is indefinite. It is not clear what "tape-like" represents. Deletion of the term "tape-like" from the claims would negate this rejection.

✓ Specifically regarding claims 18 and 21, it is not clear if the applicants are claiming that that both end portions are so worked that the widths of the end portions are reduced towards the ends or if at least one of the end portions is so worked that the width of the at least one end portion is reduced toward the end. Reconstruction of the claim clarifying the limitation would negate this rejection.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

8. Claims 14-17, 21, 23 and 25-26 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5,051,397 to Sato et al. (hereinafter referred to as Sato '397).

Regarding claims 14-17, 21, 23 and 25-26, Sato '397 discloses an oxide superconducting wire comprising a first wire, a second wire, and a junction formed by superposing the end portions of the wires with each other (Figures 4-5 and column 3, lines 42-47).

Regarding claim 15, Sato '397 discloses a brazing filler metal (2) interposed between the superposed end portions of the first and second superconducting wires (Figures 4-5 and column 2, lines 49-54).

Regarding claims 16-17, Sato '397 discloses that the superconducting wires are tape-like wires having rectangular cross sections that are bonded by superposing the wide surfaces of the tape-like surfaces (Figures 1 and 4-5, column 5, lines 13-24 and column 6, lines 25-30).

Regarding claim 21, Sato '397 discloses that the junction includes end portions so worked that the thicknesses of the wires are reduced toward the end (Figure 4).

Regarding claim 23, Sato '397 discloses that the junction is at least partially coated with a metal (6) (Figures 4-5).

Regarding claim 25, Sato '397 discloses that the superconducting wires may contain a bismuth oxide superconductor (column 3, lines 12-15).

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Regarding claim 26, Sato '397 discloses that bismuth oxide superconductor filaments are coated with silver (5) (Figures 4-5 and column 5, lines 56-61).

9. Claims 14-17, 21, and 25-26 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5,358,929 to Fujikama et al. (hereinafter referred to as Fujikama).

Regarding claims 14-17, 21, and 25-26, Fujikama discloses an oxide superconducting wire comprising a first wire, a second wire, and a junction formed by superposing the end portions of the wires with each other (Figure 4 and column 2, lines 6-16).

Regarding claim 15, Fujikama discloses a brazing filler metal interposed between the superposed end portions of the first and second superconducting wires (column 2, lines 6-16).

Regarding claims 16-17, Fujikama discloses that the superconducting wires are tape-like wires having rectangular cross sections that are bonded by superposing the wide surfaces of the tape-like surfaces (Figures 1-27).

Regarding claim 21, Fujikama discloses that the junction may have an end portions so worked that the thicknesses of the wires are reduced toward the ends (Figure 4).

Regarding claim 25, Fujikama discloses that the superconducting wires may contain a bismuth oxide superconductor (column 4, lines 16-29).

Regarding claim 26, Fujikama discloses that bismuth oxide superconductor filaments may be coated with silver, (column 2, lines 42-63 and column 4, lines 16-29).

10. Claims 14-19 and 23-26 are rejected under 35 U.S.C. 102(e) as being anticipated by USPN 5,949,131 to Sato et al. (hereinafter referred to as Sato '131).

Regarding claims 14-19 and 23-26, Sato '131 discloses an oxide superconducting

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wire comprising a first wire, a second wire, and a junction formed by superposing the end portions of the wires with each other (Figures 24-27, column 12, lines 42-63 and column 13, lines 18-43).

Regarding claim 15, Sato '131 discloses a brazing filler metal interposed between the superposed end portions of the first and second superconducting wires (paragraph bridging columns 4 and 5, and column 8, lines 1-13).

Regarding claims 16-17, Sato '131 discloses that the superconducting wires are tape-like wires having rectangular cross sections that are bonded by superposing the wide surfaces of the tape-like surfaces (Figures 1-36 and paragraph bridging columns 1 and 2).

Regarding claim 18, Sato '131 discloses a junction so worked that the widths of the wires are reduced towards the ends (Figures 24-27).

Regarding claim 19, Sato '131 discloses that the junction includes an end portion having a V shape in plane (Figures 26-27 and column 13, lines 28-29).

Regarding claim 23, Sato '131 discloses that the junction may be at least partially coated with a metal (Figure 17, column 11, lines 12-17, and Figure 20, column 11, lines 43-54).

Regarding claim 24, Sato '131 discloses that the junction is at least partially inserted into a material having an annular shape (Figure 20, column 11, lines 43-54).

Regarding claim 25, Sato '131 discloses that the superconducting wires may contain a bismuth oxide superconductor (column 2, lines 5-9).

Regarding claim 26, Sato '131 discloses that bismuth oxide superconductor filaments are coated with silver (paragraph bridging columns 1 and 2).

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T Piziali whose telephone number is (703) 306-0145. The examiner can normally be reached on Monday-Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (703) 308-3822. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-5665.

atp

atp
August 28, 2002

Andrew T Piziali
Examiner
Art Unit 1775

Deborah Jones
DEBORAH JONES
SUPERVISORY PATENT EXAMINER